Pipeline Safety Hearing
U.S. Senate Commerce, Science and Transportation Committee
Bellingham, Washington
March 13, 2000

Testimony of Carl Gast, Manager and Vice President,
Olympic Pipe Line Company

I am Carl Gast, manager and vice president of the Olympic Pipe Line Company. With me today is Tony Palagyi, Senior Environmental Project Manager, who has played a leading role in the Whatcom Falls Park restoration efforts. I would like to thank Senator Gorton and members of the Senate Commerce, Science and Transportation Committee for inviting us to participate in today=s panel.

Before I begin my remarks, allow me to introduce myself. I joined Olympic on January 3rd. I oversee the day-to-day operations of the company here in Washington and Oregon, as well as the implementation of the company=s Corridor Safety Action Plan, which is a comprehensive effort to address safety issues along the entire length of the pipeline from Ferndale to Portland.

As a certified engineer, I have 31 years of experience in the liquid fuels pipeline industry at various locations in the United States. Throughout my career as a pipeline engineer and manager, I have always made safety a priority. I have been involved in a number of efforts to address safety issues for pipelines, but I must say that the Safety Action Plan developed by Olympic in the past few months is the most far-reaching effort with which I have been involved.

On behalf of myself and Olympic Pipe Line Company, I want to express again sincere sympathy and condolences to the family and friends of the three young people who died in that tragic accident. There is nothing I can say that will replace the loss, but I *do* want to talk about what Olympic is doing to address safety issues along the entire pipeline, as well as our efforts to restore Whatcom Falls Park, where the accident occurred. In addition, I will touch upon our work with the governor=s Fuel Accident Prevention and Response Team, and our community outreach activities along the pipeline corridor.

Whatcom Falls Park Restoration

I would like to start by discussing restoration efforts in Whatcom Falls Park. Olympic Pipe Line Company is working closely with members of the Joint Restoration Committee not only to restore Whatcom and Hannah Creeks, but also to introduce significant improvements. The Joint Restoration Committee is composed of

representatives and specialists from Olympic, the City of Bellingham and other consultants. They are advised by the Trustees which includes a committee composed of the Department of Ecology, Department of Natural Resources, National Oceanic and Atmospheric Administration, Lummi and Nooksack Tribes, and the Department of Fish and Wildlife.

The initial funding for all the restoration and improvement efforts has been provided by Olympic Pipe Line Company.

Restoration. Creek banks and plant life are being restored by the collaborative efforts of the Restoration Committee and nature. Here are some examples:

- Fallen trees were added along the bank to reduce perennial flooding of both Whatcom and Hanna Creeks.
- Woven matting was used extensively at Hannah Creek to solidify the banks against erosion. Matting holds the soil while allowing grasses and plants to grow through the mesh.
- By October, plants and grass were growing up through the matting and a significant amount of native plants, such as ferns and salal, were making a comeback. In addition, invasive plants such as Canadian thistle and reed canary grass are being removed.
- Hydromulching was added to creekbanks to reduce erosion, while native grass seed was added to the banks for soil retention.
- Trees in the burn zone will be monitored through the spring of 2000 to determine which scorched trees will recover. More trees and shrubs will be planted this spring.

Improvements. In addition to restoration efforts on the creek, Olympic has worked with the Joint Restoration Committee team to improve significantly the creeks and the surrounding affected area. Improvements include:

- Building 30 new spawning pools for the salmon.
- Creating pools and minimizing obstructions to help salmon move upstream.
- Adding creek meanders and placing logs in the creek banks to help retain the banks of the streams. The increase in meanders helps slow Hannah Creek down, which improves the fish habitat.
- Establishing intentional log/debris spots in the creek. This builds habitat needed to capture organic matter that nurtures and sustains the life of the creek at the micro level. The logs also provide refuge for fish.
- A total of nearly 6,000 pounds of metal debris was pulled from the creek during the clean up.
- We are replacing the Valencia Street Bridge and making improvements directly related to the park.

Salmon are returning. As early as late August, salmon were returning and had

made it as far as naturally possible to Pixie Falls, inside Whatcom Falls Park. And late November, approximately 20 Chum Salmon were sighted at the Falls, which is more than usual and is considered a good sign.

Ultimately, restoration efforts have increased salmon habitat in the park by about 60 percent. Along with these restoration efforts, creek improvements will enhance the habitat needed by salmon and resident fish such as rainbow and cutthroat trout for years to come.

Long-Term Restoration: Olympic will continue working closely with the Natural Resources Trustee group, chaired by Clare Fogelsong of the City of Bellingham, and the Department of Ecology. The long-term restoration phase expected to last up to five years.

Key elements of the Long-Term Restoration effort will include:

Control of invasive plants
Re-vegetation
In-stream habitat improvements
Multi-year monitoring
Potential land acquisitions and,
Monitoring ground water.

Olympic=s Safety Action Plans

Next, I would like to discuss two major safety action plans undertaken by Olympic. The Bellingham Immediate Safety Action Plan was developed in cooperation with the City of Bellingham and addresses safety efforts in Whatcom and Skagit Counties. Our Corridor Safety Action Plan was approved in October by the Olympic Board of Directors as a comprehensive program to address safety along the entire pipeline.

Following the June accident, the Office of Pipeline Safety issued a Corrective Action Order, which it amended twice. These directives spelled out the steps Olympic was required to take before receiving permission to resume operation of the pipeline.

Collectively, these safety actions address all the issues we understand are under investigation by the National Transportation Safety Board as potential causes or contributing factors to the accident.

These areas include the integrity or condition of the pipe, valves, pressure levels, computer software and hardware and actions by the employees who operate the pipeline from Olympic=s Control Center in Renton.

In other words, we are implementing safety actions in each area under investigation, regardless of whether that area ultimately is found to have been involved in the accident.

Here are some of the major actions we have taken to comply with the requirements of the federal Office of Pipeline Safety.

Valves

First, investigators are attempting to determine whether a pressure relief valve may have failed to function properly, and if that was a factor in the June 10 accident. Investigators are also evaluating whether the number of mainline block and check valves could have reduced the size of the release.

Here=s what OPL is doing or has done:

OPL has tested its relief valves and commissioned a detailed engineering study of the delivery facility where the relief valve was located.

Olympic also has retained an independent professional engineering firm to determine whether changes should be made in the number and location of valves to reduce the potential impact of an accidental release on environmentally sensitive areas and population centers.

Marmac has completed a study of the northern segment of the line, and as a result, Olympic has installed five new valves in the Bellingham area.

Marmac is now working on similar studies of the pipeline all the way to Portland.

In addition, it=s important to note that Olympic regularly tests the pipeline mainline valves and will perform additional tests in the upcoming months. These tests are conducted through field inspections by an operations technician as well as through monitoring at its Control Center in Renton.

Pressure Issues

Second, investigators are attempting to determine if a pressure increase in the pipe contributed to the accident.

Here=s what OPL is doing or has done in this area:

Pressure Surge Analysis: Olympic has hired Stoner Associates to conduct computer simulated pressure surge analyses to show what pressures might result at various points along the pipeline under a variety of operating conditions.

June 10 re-enactment. Results of the surge analysis re-enacting the June 10 accident showed that, at the time, the pressure in the pipe at the rupture point was below both its maximum allowable operating pressure and its maximum

allowable surge pressure, as established under Department of Transportation regulations.

Line Integrity

The third issue investigators are looking into as a possible cause of the rupture is line integrity or the condition of the pipeline. The NTSB has reported that the section of pipe that ruptured showed clear evidence of damage consistent with markings left by construction equipment.

Here=s what Olympic is doing about the issue of line integrity:

Internal Inspections: The entire pipeline from Ferndale to Portland will be inspected internally. CC Technologies of Dublin, Ohio, has been retained to help develop and implement the internal inspection program. This includes:

Identifying and evaluating available inspection tools;
Developing a process to use and verify the information;
Developing a method and protocol for inspections;
Implementing the program systemwide.

Olympic likely will begin the process of internal inspection in Whatcom and Skagit Counties. The section of the pipeline from Ferndale Station in Whatcom County to Allen Station in Skagit County will be inspected using three state-of-the-art devices: a geometry device; a high resolution magnetic flux device; and an ultrasonic device. These inspection devices run inside the pipe and are propelled down the pipeline by the flow of petroleum products.

The Office of Pipeline Safety must approve the selection of the devices that will be used for the internal inspection of the pipeline.

Each device is designed for a specific purpose.

A ***geometry device*** looks for changes in the roundness of the pipe.

A ***high-resolution magnetic flux device*** uses a magnetic field to locate and identify metal loss due to internal or external corrosion.

An ***ultrasonic device*** utilizes ultrasonic pulses to inspect the pipe. This device is designed to identify the same range of features and defects as the high-resolution magnetic flux tool but uses ultrasonic pulses rather than a magnetic field to collect the data.

Field Inspections and Repairs: In cooperation with the Office of Pipeline Safety and community representatives, Olympic will review the internal inspection data and determine if there are any anomalies requiring visual inspection. In cooperation with the Office of Pipeline Safety and community representatives, Olympic will review the internal inspection data and determine if a visual inspection of the pipe is required. These field inspections will be undertaken based on Department of Transportation requirements and any repairs will be made in accordance with standards set by the American Society of Mechanical Engineers.

Olympic plans to add another step to the internal inspection process. The Company will dig up and visually inspect an additional number of anomalies that fall below the criteria for excavation as approved by the Office of Pipeline Safety. The purpose of this additional step is to compare the internal inspection data with a visual inspection of the corresponding portion of pipe.

Olympic also is a committed partner in our state=s One-Call Program which requires excavators to call before they dig near utility lines to give utilities the opportunity to properly mark their lines and/or observe any digging near or around their lines.

Operations Controller Actions

Investigators are evaluating whether any actions taken on June 10th by the employees who operate Olympic=s computer system in Renton were a contributing factor to the accident.

Here are the actions OPL has undertaken:

Operator Re-Training: Olympic has completed a re-training program for its operations controllers, who operate the pipeline from Olympic=s Control Center in Renton. Training also is being provided for the technicians who perform a variety of field tasks, including maintaining pumps and valves, testing the petroleum stream, and supervising the Aone-call system@ in effect when anyone digs near the pipeline. Technicians who cover Whatcom and Skagit Counties have already received additional training.

The retraining program goes beyond requirements of the Office of Pipeline Safety=s first amended corrective action order in that it includes training for the technicians. The program also begins the process of early fulfillment of OPS= A final rule@ announced August 26 that requires pipeline operators to develop and maintain a written qualification program for individuals performing safety tasks

on pipeline facilities.

All employees in other areas along the corridor and throughout the company will receive training and be re-qualified by the end of next year, well in advance of the deadline of Oct. 1, 2002 set by OPS in its final rule.

Computer software and hardware

Investigators are attempting to determine whether an internal database error, along with a simultaneous increase in processing demands, caused a computer slowdown on June 10th. During the computer slowdown, the controllers were unable to obtain current pipeline information on the computer screens and to process commands to equipment, such as pumps along the pipeline.

Here=s what Olympic has done in this area:

Computer Analysis and Upgrade: Olympic has completed an analysis of its Supervisory Control and Data Acquisition System (SCADA), the software that operates its computer system. Based on that analysis, system parameters have been modified. Olympic has also made modifications, upgrades and design changes to its computer system, including an increase of 750 percent in processing capacity.

That outlines some of the actions we have taken that support our January 14 request

The pressure in the line running from Ferndale to Bayview will be limited to 70 percent of its normal operating pressure until it is verified that the system is operating properly. At that time, pressure may be increased only to 80 percent of its normal operating pressure. The pressure in the entire system is limited to 80 percent until Olympic receives written authorization to increase the pressure from the Office of Pipeline Safety.

The successful startup will signal the next phase of testing we have agreed to do that will include the use of different internal inspection devices throughout the entire system, as previously described.

I want to emphasize that our Safety Action Plans are not an end in themselves, but an on-going continuos effort as we address safety along the entire pipeline.

Governor's Fuel Accident Prevention and Response Team

I now would like to take a few moments to describe our recent work with Governor Locke's Fuel Accident Prevention and Response Team. I want to acknowledge the hard work of the Team. Pipeline safety covers a broad range of issues, from complicated legal questions of federal, state and local government relationships, to highly technical engineering questions of pipeline operations, as well as complex logistical questions of emergency response. We appreciated the Team's efforts to begin to tackle the issues presented.

The Team made several recommendations concerning public awareness, local emergency response, and the One-Call system, many of which are now the subject of pending state legislation.

Olympic believes these issues are all extremely important, and supports recommendations that would strengthen and improve public awareness and emergency response.

Olympic strongly supports continued development of the One-Call system. One statewide number will reduce confusion.

One issue that keeps coming up is the degree of authority states will have over interstate pipelines. In our view, the existing division of regulatory responsibility makes sense. Further, we are concerned about the potential for patchwork regulations that differ from state-to-state and the implications that would have for interstate commerce. Having a unified set of regulations is important to its smooth operation.

Ultimately, we recognize that the balance in this issue is up to elected officials such as yourselves. However, we encourage you to consider carefully the need for a

unified set of regulations for interstate pipelines.

Community Outreach

Last but certainly not least, Olympic is dedicated to reaching out to the communities along the pipeline. Our Corridor Safety Action Plan contains a strong community outreach core. Since the Board approved this plan last October, we have met with local media up and down the corridor, as well as held three major community briefings in December in the three most populous counties through which our pipeline travels. We have held 64 meetings with local governments, other elected officials, local emergency response groups, school districts and neighborhood associations.

We also are committed to reviewing with the communities along the pipeline the results from our upcoming internal and field inspections, our valve effectiveness study and our surge analyses.

Since the new inspections won=t be completed for a number of months, many communities have asked us to review the results of our 1996/97 inspections. However, our recent experience in sharing this technical information with some communities is that it can be difficult to understand.

Therefore, this week we are holding three Pipeline Integrity Workshops that are designed to assist communities in understanding the 1996/97 data as well as our upcoming inspections, and the criteria used to conduct field inspections. The workshops also will cover how the technology employed by the inspection tools we are using in 2000 differs from what was used in 1996/97. Our consultant, CC Technologies will be conducting the workshops.

Conclusion

In conclusion, I would like to stress that Olympic's Safety Actions Plans are comprehensive and community-oriented. We are dedicated to working with communities and elected officials, such as yourselves, to address safety along the length of our pipeline. We have worked closely with the Governor's Response Team, the state legislature, and others in the pursuit of this common goal. We believe the Whatcom Falls Park restoration effort is an example of what we can achieve if we work together.

Now, if there are any questions I will be happy to answer them now or in writing.

Thank you.